

Claims

1. Artificial intra ocular lens of variable optical power **characterized by** at least two optical elements which can be shifted relative to each other in a direction extending
5 perpendicular to the optical axis wherein the optical elements have such a shape that they exhibit, in combination, different optical powers at different relative positions.
2. Artificial intra ocular lens according to claim 1, **characterized by** positioning means for positioning the optical elements in the eye and driving means, operable by the
10 user, for at least one of the optical elements to execute a movement of said optical element relative to the other optical element.
3. Artificial intra ocular lens according to claim 2, **characterized in that** the driving means that have been adapted to be connected to the ciliary muscle of the eye.
15
4. Artificial intra ocular lens according to claim 1, 2 or 3, **characterized by** adjusting means which are connected to the optical elements for adjustment of the resting position of the optical elements.
- 20 5. Application of artificial intra ocular lens according to one of the preceding claims, **characterized by** application of the lens for correction of a disorder of the eye.
6. Application of artificial intra ocular lens according to claim 2 or 3, **characterized by** the use of the lens as an accommodating artificial intra ocular lens.
25
7. Application of artificial intra ocular lens according to claim 4, **characterized by** the use of the lens as a non-accommodating artificial intra ocular lens.
8. Artificial intra ocular lens according to any of the claims 1 - 4, **characterized in**
30 **that** at least one of its optical elements has at least one saddle shaped surface.
9. Artificial intra ocular lens according to any of the claims 1 - 4, **characterized in that** at least one of its two planes has an optical diffraction structure.

10. Artificial intra ocular lens according to any of the claims 1 - 4, **characterized in that** at least one of the optical elements comprises an optical structure of the GRIN type.
- 5 11. Artificial intra ocular lens according to any of the claims 1 - 4, **characterized in that** the optical elements are adapted to change their combined optical power when rotated relatively to each other.